ABSTRACT

The invention concerns a real-time navigation method for locating a rover (*SUR*) using three-carrier radio signals of three different frequencies to determine the position of a user, transmitted by satellites (SAT_1-GPS_{E1} through SAT_n-GPS_{En}). The method comprises a first step for determining "extra-wide lane" carrier phase ambiguity, a second step for estimating "wide-lane" phase ambiguity, and a third step for resolving the phase ambiguity of one of the frequencies. An additional step consists in the application of real-time ionospheric corrections during the third step, these ionospheric corrections being based on a continuously updated ionospheric model of said ionospheric layer calculated by a fixed ground reference station (REF-REF_E), combined with geodetic data calculated by a so-called master fixed ground reference station (REF_M-REF_{ME}). The invention also concerns a system for implementing the method.